

AMENDMENTS TO THE SPECIFICATION:

Please replace paragraph [00013] with the following amended paragraph:

[00013] Referring to FIG. 2 and FIG. 6, [] and taking one edge as example, suppose that the left edge of the original line 80 in FIG. 2 just touches the right bottom corner of the pixel [82]72, thereby partially covering the pixel. In accordance with the present invention, the edge of the line segment is expanded (shown as expanded line segment 84 in FIG. 2) to the left to include the center of the just barely touched pixel [82]72. In the x-direction, this expansion amounts to a displacement 86 in the x-coordinate of the line segment edge from x' to x_0 in FIG. 6. The

displacement $x' - x_0 = \Delta x = \frac{b}{2a} + \frac{1}{2} = \frac{a+b}{2a}$, where the first term is the x-directed distance

from x' to the pixel boundary and the second term is the x-directed distance from the pixel boundary to the pixel center x_0 . This is the amount by which the c parameter must be adjusted to move the edge of the line over to include the center of a partially covered pixel. Note that the slope of the line is not being altered, only the y-intercept of the edge of the line. Because

$$x' - x_0 = \frac{a+b}{2a}, \text{ the new line edge relation becomes } ax_0 + by_0 + c + \frac{a+b}{2} \geq 0.$$

Please replace paragraph [00014] with the following amended paragraph:

[00014] To determine whether a pixel is included in the rendering of the line now translates into evaluating the edge relation of the line $ax + by + c + \frac{a+b}{2} \geq 0$ at (x_0, y_0) . Here it is assumed that $a \geq 0, b \geq 0$ [.]; for all other cases it is easy to prove that the same amount of adjustment $\Delta c = \frac{|a|+|b|}{2}$ applies to the other edges as well.